

AMENDMENTS TO THE CLAIMS:

1. (Presently Amended) An optical switch device for redirecting at least a portion of a beam of light traveling along a first direction to a second direction, said optical switch device comprising:

a base member; and

a reflective panel pivotally connected to the base member, said reflective panel comprising:

a first substrate;

a reflective layer disposed above the first substrate;

a heat sink layer comprised of a diamond-like carbon (DLC)

disposed between the first substrate and the reflective layer,

said DLC heat sink layer having a thickness between about

2.0 nm and 4000 nm.

2. (Original) The optical switch device according to claim 1, wherein the heat sink layer is comprised of hydrogenated amorphous carbon.

3. (Cancelled).

4. (Original) The optical switch device according to claim 1, wherein the heat sink layer is comprised of diamond.

5. (Cancelled).

6. (Original) The optical switch device according to claim 3, further comprising:

an actuator connected to the base member and the reflective panel, said actuator being operative to move the reflective panel between (i) a reflective state and (ii) a non-reflective state.

7. (Currently Amended) The An optical switch device according to claim 1 for redirecting at least a portion of a beam of light traveling along a first direction to a second direction, comprising,

a base member; and

a reflective panel pivotally connected to the base member, said reflective panel comprising:

a first substrate;

a reflective layer disposed above the first substrate;

a heat sink layer

wherein the reflective panel further comprises:

a liquid crystal layer disposed above the reflective layer;

a transmissive electrode layer disposed above the liquid crystal layer; and

a second substrate disposed above the transmissive electrode layer.

8. (Currently Amended) An optical communication system comprising:
- a plurality of input fibers operative to emit light beams;
 - a first microelectromechanical mirror positioned to receive light beams emitted by at least one of the input fibers, said first microelectromechanical mirror being adapted to selectively reflect light beams along a plurality of paths, said first microelectromechanical mirror including:
 - a substrate;
 - a heat sink layer comprised of diamond, hydrogenated amorphous carbon, or diamond-like carbon (DLC) covering the substrate said heat sink layer having a thickness between about 2.0 nm and 4000 nm,
 - a reflective layer covering the heat sink layer; and,
 - a plurality of output fibers operative to receive reflected light beams.
9. (Original) The optical communication system according to claim 8, wherein the heat sink layer is comprised of hydrogenated amorphous carbon.
10. (Original) The optical communication system according to claim 8, wherein the heat sink layer is comprised of diamond-like carbon (DLC).
11. (Original) The optical communication system according to claim 8, wherein the heat sink layer is comprised of diamond.
12. (Cancelled).

13. (Original) The optical communication system according to claim 8, further comprising:

a second microelectromechanical mirror positioned to receive light beams reflected by the first microelectromechanical mirror, said second microelectromechanical mirror being adapted to reflect light beams along a path toward at least one of the output fibers.

14. (Currently Amended) In a reflective optical switch device for use in an optical communication system, said optical switch device having at least one substrate layer, and a reflective layer for reflecting laser beams incident upon a local area, a method of dissipating heat from the local area of the reflective surface comprising:

providing a hydrogenated amorphous carbon layer of diamond-like carbon (DLC) between the reflective layer and the substrate by one of plasma enhanced chemical vapor depositing (PECVD), chemical vapor depositing (CVD) or ion beam depositing (IBD), the DLC on the substrate.

15. (Cancelled).

16 (Cancelled).

17. (Currently Amended) The method as set forth in claim 13 wherein ~~providing step includes:~~

~~chemical vapor depositing (CVD) the DLC on the substrate in~~ has a thickness of between 2.0 nm and 4000 nm.

18. (Cancelled) .

19 (Currently Amended) A method of making a reflective optical switch comprising:

(a) providing a first substrate layer comprised of a diamond-like carbon via enhanced chemical deposition;

(b) providing a hydrogenated amorphous carbon heat sink layer over the first substrate layer; and,

(c) providing a reflective layer over the heat sink layer, said reflective layer being suitable to redirect light beams incident thereon.

20. (Cancelled).

21. (Original) The method as set forth in claim 19 further including:

(d) providing a liquid crystal (LC) layer over the reflective layer;

(e) providing a transmissive electrode layer over the LC layer; and

(f) providing a second substrate over the transmissive electrode layer.